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FAUNISTIC NOTE

The first record of *Aplocnemus jejunus* (Coleoptera, Rhadalidae) from Romania

Isidor Sebastian Plonski[1], Alexandru-Mihai Pintilioaie[2]

1 *International Research Institute for Entomology, Natural History Museum, Burgring 7, 1010 Vienna, Austria*

2 *Marine Biological Station "Prof. Dr. Ioan Borcea", Agigea, "Alexandru Ioan Cuza" University of Iași, B-dul Carol I, No. 20A, 700506 Iași, Romania*

Corresponding author: *Isidor Sebastian Plonski* (isidor.plonski@nhm-wien.ac.at)

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Abstract

Aplocnemus jejunus Kiesenwetter, 1863 is recorded in Romania for the first time. An up-to-date distribution map and a summary of its currently known biology is presented, together with pictures of a male specimen collected in the 'Marine dunes from Agigea'.

Keywords

Cleroidea, biology, distribution, faunistics.

Aplocnemus jejunus was described in a footnote to a textbook (Kiesenwetter 1863), and redescribed by Liberti (1995), who recognized *A. capillicornis* Abeille de Perrin, 1907 as a junior subjective synonym. Although the Kiesenwetterian type material is probably lost, there has been general agreement on the interpretation of this species (Liberti 2018). *A. jejunus* can already be recognized eidonomically (Fig. 1A; cf. Constantin and Liberti 2011: pl. 19, fig. 75; cf. Papi and Franzini 2018: fig. 2): Males possess long, almost pectinate antennae, a rather flat body with a rough, heavily and disorderly impressed surface; elytral pubescence is double: long, erect, mostly grey setae near elytral borders and whitish shorter, variably slant setae all-over; dorsal surface is of metallic grey-green colour, while the second and third antennomeres,

Figure 1. The adult male of *Aplocnemus jejunus* retrieved from the 'Marine dunes from Agigea' in Romania. **A** Habitus, dorsal. **B** Median lobe, lateral.

the apices of the tibias and the basal two tarsomeres are lightened to orange-brownish (Liberti 1995, 2009, 2018: fig. 10). Furthermore, the median lobe (Fig. 1B; cf. Liberti 1995: figs. 28–29; cf. Constantin 2007: fig. 16; cf. Constantin and Liberti 2011: fig. 109) is also species-specifically shaped. Fiori (1972: fig. 35) illustrates two body parts of the mature larva.

Aplocnemus jejunus Kiesenwetter, 1863 is an uncommon, rare to very rare Rhadalid beetle (Liberti 2009, 2018; Liberti and Piccolino 2014) with a wide, approximately central-mediterranean distribution (Liberti 2009; Liberti and Piccolino 2014), which extends into the north-east Balkan peninsula and reaches north below the 46°N latitude (Fig. 2). The phylogenetic affinities of this species are presently unknown (Liberti 2009).

Aplocnemus jejunus is a mediterranean, arboricolous species (Constantin and Liberti 2011) and an entomophagous member of the saproxylic food web. For example,

Hardersen et al. (2014) report that twelve of fourteen imagines were collected with flight-interception traps after Malaise, Fauld and Crabtree in the canopy (15–21 m above the ground, crowns of large *Quercus robur* L. trees) of the nature reserve 'Bosco Fontana' between 1st April and 25th November 2008. Papi and Franzini (2018) report that eight of eleven specimens collected in the Pratomagno massif between 180 and 650 meters altitude come from winter collections on dead wood, viz. a cavity of a *Castanea sativa* Mill. tree (one exemplar, 20th January 2002), a rotting *Quercus ilex* L. tree (one exemplar, 10th February 2003), fallen small branches of *Juglans regia* L. (five exemplars ex larva, emergence from 13th till 14th April 2013) or *Ficus carica* L. (one exemplar ex larva, emergence on 1st April 1995). Other Italian adult specimens have been found wintering under tree bark (Liberti 2009).

Adults of *A. jejunus* overwinter and resume their activity in spring, and the larvae are active until the beginning of November, then pupate till mid to end of November, either in bark crevices, subcorticolous or in a small gallery in the wood (Prota 1966; cf. Fiori 1972). Prota (1966) reports the larvae of *A. jejunus* as predators of the egg masses of *Lymantria dispar* (L., 1758) (Lepidoptera: Erebidae). But, according to Luciano and Prota (1981), it is not of high significance as a pest-controlling agent for the Sardinian *Quercus suber* forests' defoliating populations of *L. dispar*. However, the

Figure 2. Distribution map of *Aplocnemus jejunus* based on all published records. Map created with the SimpleMappr tool (https://www.simplemappr.net/).

oviphagous activity of the *A. jejunus* larvae, which dig meandering tunnels into an egg mass, makes parasitism by *Ooencyrtus kuvanae* (Howard, 1910) (Hymenoptera: Encyrtidae) more likely (Prota 1966).

Material examined: Romania (Northern Dobruja): Constanţa county: Agigea commune: 'Dunele Marine de la Agigea' nature reserve: 44.089056°N, 28.642396°E; 17 Nov. 2022, 1 ♂, on dead logs of *Prunus* sp.; leg. P. Spaseni, coll. A.-M. Pintilioaie, det. G. Franzini, confirm. I.S. Plonski.

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References

Constantin R (2007) Révision des *Aplocnemus* de France avec description de trois nouvelles espèces. Observations taxonomiques et faunistiques sur les espèces françaises de Dasytidae et Acanthocnemidae (Coleoptera Cleroidea). Bulletin de la Société entomologique de France 112(2): 151–170. [in French]

Constantin R, Liberti G (2011) Morphologie, biologie, clés d'identification, faunistique. In: Constantin R, Liberti G (Eds) Coléoptères Dasytidae de France. Musée des Confluences, Lyon, 8–84. [in French]

Fiori G (1972) Contributi alla conoscenza morfologica ed etologica dei Coleotteri. IX. *Psilothrix viridicoerulea* (Geoffr.) (Melyridae Dasytinae). Studi Sassaresi, Sezione 3: Annali della Facoltà di Agraria dell'Università di Sassari 19(1971): 1–70. [in Italian]

Hardersen S, Curletti G, Leseigneur L, Platia G, Liberti G, Leo P, Cornacchia P, Gatti E (2014) Spatio-temporal analysis of beetles from the canopy and ground layer in an Italian lowland forest. Bulletin of Insectology 67(1): 87–97.

Kiesenwetter H von (1863) Naturgeschichte der Insecten Deutschlands. Erste Abtheilung. Coleoptera. Vierter Band. Nicolaische Verlagsbuchhandlung (G. Parthey), Berlin, 652, note 1. [in German]

Liberti G (1995) Revisione delle specie italiane del genere *Aplocnemus* Stephens (Coleoptera Melyridae Rhadalinae). Memorie della Società entomologica italiana 73: 153–194. [in Italian]

Liberti G (2009) The Dasytidae (Coleoptera) of Sardinia. Zootaxa 2318(1): 339–385. https://doi.org/10.11646/zootaxa.2318.1.12

Liberti G (2018) The *Aplocnemus* Stephens, 1830, of Greece (Coleoptera, Cleroidea, Dasytidae). A contribution to their knowledge. Natural History Sciences 6(1): 3–26. https://doi.org/10.4081/nhs.2019.389

Liberti G, Piccolino DM (2014) Contributo alla conoscenza della biodiversità entomologica del Parco del Ticino: Cantharidae (Coleoptera, Elateroidea), Cleridae, Malachiidae e Dasytidae (Coleoptera, Cleroidea). Natural History Sciences 1(2): 65–74. [in Italian] https://doi.org/10.4081/nhs.2014.204

Luciano P, Prota R (1981) La dinamica di popolazione di *Lymantria dispar* L. in Sardegna. 1: Indicatori della gradazione ricavati dalle ovideposizioni. Studi Sassaresi, Sezione 3: Annali della Facoltà di Agraria dell'Università Sassari 27: 137–160. [in Italian]

Papi R, Franzini G (2018) Catalogo dei Malachiidae e Dasytidae del Massiccio del Pratomagno (Preappennino Toscano) (Coleoptera: Cleroidea). Onychium 14: 145–168. [in Italian] https://doi.org/10.5281/zenodo.1219559

Prota R (1966) Contributi alla conoscenza dell'entomofauna della Quercia da sughero (*Quercus suber* L.). V. Osservazioni condotte in Sardegna su *Oencyrtus kuwanai* [sic!, = *Ooencyrtus kuvanae*] (Howard) (Hymenoptera Encyrtidae) nuovo per la fauna italiana. Memorie della Stazione sperimentale del sughero di Tempio Pausania 17: 1–26. [in Italian]